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Roy F. Weston, Inc.
1400 Weston Way
P.O. Box 2653
West Chester, PA 19380
610-701-3000 • Fax 610-701-3186
www.rfweston.com

May 23, 2000

Ms. Ann Breslin
Environmental Scientist
Department of Natural Resources and
Environmental Control
391 Lukens Drive
New Castle, DE 19720-2774

W.O. No. 20101.252.003.6269

Subject: 12th Street Landfill Site – Phase I
Wilmington, New Castle County

Dear Ms. Breslin:

Enclosed for your review are three (3) sets of the Erosion and Sediment Control application package for the referenced project. The package, submitted on behalf of the U.S. Environmental Protection Agency, includes the completed DNREC Sediment & Stormwater Plan Review Checklist, Design Report, and E&S Drawings relating to "Phase I" of the project. This phase would enable the construction of access and haul roads, as well as the gravel staging area for construction trailers and laydown storage, etc. (A separate submittal will be made for Phase II which will subsequently address remedial measures associated with the capping of the "Area of Concern" depicted on the Plans.)

Should you have any questions or require additional information, please contact me at (610) 701-7545.

Very truly yours,

ROY F. WESTON, INC.

(b) (4) [redacted]

Sr. Civil Engineer

cc: Michael Towle – U.S. Environmental Protection Agency
(b) (4) [redacted] – SATA (Delran, NJ)
(b) (4) [redacted] - WESTON

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Delaware DNREC
Div. of Soil & Water Conservation
89 Kings Hwy.
Dover, DE 19901
Phone: (302) 739-4411
FAX: (302) 739-6724

DELAWARE SEDIMENT & STORMWATER PROGRAM

APPLICATION FOR SEDIMENT AND STORMWATER MANAGEMENT PLAN APPROVAL

PROJECT OR CONTRACT NUMBER: 12th Street Landfill Site - Phase I E&S Plan

PROJECT DESCRIPTION: Remedial Closure

PROJECT LOCATION: Wilmington, New Castle County
(town/city) (county) (hundred/tax parcel #)

PROJECT DISTURBED AREA IN ACRES: 3.5 acres (Phase I)
(expressed as acres and tenths of acres (i.e. 4.2 acres))

APPLICANT:
OWNER/DEVELOPER NAME: U.S. Environmental Protection Agency

APPLICANT
OWNER/DEVELOPER ADDRESS: 1650 Arch Street (street) Philadelphia, PA (city) 19103-2027 (zip)

APPLICANT CONTACT: Mr. Michael Towle
OWNER/DEVELOPER PHONE #: (215) 814-3272 FAX #: (215) 814-3254

CONSULTANT/ENGINEER NAME: Roy F. Weston, Inc.

CONTACT PERSON/PROJECT ENGINEER: William A. Zahn, P.E.

CONSULTANT/ENGINEER ADDRESS: 1400 Weston Way
P.O. Box 2653 (street) West Chester, PA (city) 19380 (zip)

CONSULTANT/ENGINEER PHONE #: (610) 701-7545 FAX#: (610) 701-5129

FOR OFFICE USE ONLY

☐ DESIGN REPORT

☐ PLAN

☐ CHECKLIST

FEE PAID $ _____

PERMIT # _____

STATE OF DELAWARE
DNREC
SEDIMENT AND STORMWATER MANAGEMENT PLAN

APPROVED BY _____

DATE _____ TITLE _____

Please submit this application with the Sediment and Stormwater Management Plan Checklist, owner/developer certification, design certification, agent's authorization, and plans, to the DNREC, Division of Soil and Water Conservation, Sediment and Stormwater Management Program, 89 Kings Highway, Dover DE. 19901.

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OWNER/DEVELOPER CERTIFICATION

"I/We certify that the information on this form and the attached plans is true and accurate to the best of my/our knowledge."

"I/We understand that DNREC may request information in addition to that set forth herein as may be deemed appropriate in considering this application."

"I/We will abide by the conditions of this approval as issued."

"I/We hereby certify that all clearing, grading, construction and/or development will be done pursuant to the approved plan, and that all responsible personnel involved in the land disturbing activities will have a Sediment and Stormwater Management Certification from the Delaware Department of Natural Resources and Environmental Control."

"I/We hereby authorize the right of entry for periodic on site inspections by State of Delaware, Department of Natural Resource and Environmental Control compliance personnel and/or authorized agents."

[signature] for USEPA Reg III 5/23/00
Owner/Developer Signature APPLICANT Date

MICHAEL TOULE EPA-OSC
Owner/Developer Name and Title (Printed or typed)

DESIGNER CERTIFICATION

"I hereby certify that, to the best of my knowledge, information, and belief, this plan has been designed in accordance with the current Delaware Erosion and Sediment Control Handbook and the Delaware Sediment and Stormwater Regulations.

(b) (4) [signature] 5/23/00
Designer Signature Date

No. 10716
Delaware Reg. No. (if applicable)

(b) (4) Senior Civil Engineer
Designer Name and Title (Printed or typed)

P.E.
Type (P.E., P.L.S., R.A., or R.L.A.)

AGENT AUTHORIZATION*

(* If this authorization form is completed with the application, all future correspondence may be signed by the duly authorized agent.)

I, _____, hereby designate and authorize the following identified agent to act on my behalf in the processing of this application and to furnish any information that is requested.

AGENT NAME: _____

AGENT ADDRESS: _____
street city zip

AGENT PHONE #: ( )_____ FAX#: ( )_____

_____ _____
Owner/Developer Signature Date Agent Signature Date

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DELAWARE SEDIMENT & STORMWATER PROGRAM

Sediment & Stormwater Plan Review Checklist

DATE RECEIVED: _____ **PROJECT NUMBER:** _____

PROJECT NAME: 12th Street Landfill Site, Wilmington, New Castle County (Phase I E&S Plan)

Section G: **General Information**
Section N: **Notes**
Section E: **E & S**
Section S: **Stormwater Management**

Section G:

1 X Completed application signed by the owner, one set of plans, and the checklist must be submitted for review. (signed by EPA as applicant)
2 X Provide the name, mailing address, and phone number of the owner of the property, the land developer, the engineer or consultant and the applicant. Provide names of adjacent property owners on the plan.
3 X Provide a legend on the Sediment and Stormwater Management Plan.
4 X Provide a "limit of disturbance" line and the disturbed area in acres on the plan.
5 X Provide a vicinity map with a scale no smaller than 1" = 1 mile.
6 X Provide a north arrow on plan.
7 X Maximum plan scale of 1" = 100'.
8 X Plans should be submitted on 24" x 36" (minimum) sheets unless otherwise approved.
9 X When two (2) or more sheets are used to illustrate the plan view, an index sheet is required, illustrating the entire project on one (1) 24" x 36" (minimum) sheet.
10 X Provide existing and proposed contours based on mean sea level datum provided at one (1) foot intervals. Total contributing drainage are must be shown regardless of being located on or off-site.
11 X Provide existing and proposed spot elevations based on mean sea level datum provided on a fifty-foot grid system. Include high and low points. (This is for small projects only).
12 X State and Federal wetlands must be accurately delineated.
13 X The National Flood Insurance Program 100 Year Flood Zone must be delineated.
14 X Provide soils mapping on plan with a general description of each soil.
15 X All streams and drainage ways must be delineated.
16 X All sediment and stormwater management practices must be located on the plan.
N/A 17 ___ Provide corner and lowest floor elevations for all buildings.
18 X Provide the volume of any spoil or borrow material.
19 X Show project benchmark and identify elevation and date.

Section N:

1 X Include a note that specifies that the DNREC, Sediment and Stormwater Management Program must be notified in writing five (5) days prior to commencing with construction. Failure to do so constitutes a violation of the approved sediment and stormwater management plan.
2 X Include the following statement "Review and or approval of the Sediment and Stormwater Management Plan shall not relieve the contractor from his or her responsibilities for compliance with the requirements of the Sediment and Stormwater Regulations, nor shall it relieve the contractor from errors or omissions in the approved plan."
3 X Include a signed Owner's Certification that states "I, the undersigned, certify that all land clearing, construction and development shall be done pursuant to the approved plan." This must be signed in ink on each plan submitted or on an original reproducible.
Noted as Applicant's Certification (by U.S. EPA)

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4 X Include the following note. "If the approved plan needs to be modified, additional sediment and stormwater control measures may be required as deemed necessary by the DNREC".

5 X Provide details of temporary and permanent stabilization measures including placement of the following statement on all plans. "Following soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within 14 calendar days as to the surface of all perimeter sediment controls, soil stockpiles, and all other disturbed or graded areas on the project site."

6 X Provide a detailed sequence of construction, at a minimum, include the following activities: clearing and grubbing for those areas necessary for installation of perimeter controls, construction of perimeter controls, remaining clearing and grubbing, road grading, grading for the remainder of the site, utility installation and whether storm drains will be used or blocked until after completion of construction, final grading, landscaping or stabilization, and removal of sediment control practices.

7 X Specify whose responsibility it will be to maintain and repair all erosion and sediment control and stormwater management practices during utility installation.

8 X A clear statement of defined maintenance responsibility shall be established during the plan review and approval process.

Section E:

1 X Provide details and specifications for all erosion and sediment control management practices used.

2 X Stone check dams are required in all swales, ditches and channels. Provide details, cross-sections and specifications, including check dam station locations. Check dam depth must be such that a maximum stone depth is achieved while ensuring that flow continues over the center of the dam. A minimum 6" depth from the weir to the top of the structure is required.

3 X All stone, with the exception of check dams, must be underlain with a geotextile fabric. Geotextile fabric specifications must be provided for various applications.

4 X Outlet protection is required at all points of discharge from pipes, channels and spillways. Provide details, cross-sections and specification, including d50 stone size, stone depth, outlet dimensions and type of geotextile fabric.

5 N/A Erosion control matting is required on slopes of 3:1 or greater.

6 X Specify what stabilization measures shall be initiated if dust control becomes a problem.

7 N/A Specify details of any unusual practices required.

8 X Sediment traps and basins shall be utilized and sized to accommodate 3600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete. These structures must be located at the base of the drainage area. The following information is required: top of slope elevation, bottom elevation, outlet elevation, dimensions, proposed volume, required volume, type of trap or basin, and contributing drainage area. Include details, cross-sections and specifications; a minimum 2:1 length to width ratio is required.

9 X Diversions must be used to direct run-off into traps. When sediment laden stormwater is directed to traps and basins by closed pipe systems, temporary diversions must be used to direct stormwater to traps and basins until closed pipe systems are operations.

10 X Soil stockpile areas must be delineated. Locate stockpiles on areas with little or no slope. Stockpiles must be surrounded with silt fence or a stabilized earthen berm.

Section S:

1 X Sub-watershed areas must be delineated on the plan for both the pre- and post-development conditions. Provide the area in acres of each sub watershed. (enclosed with Design Report)

2 X Provide directional stormwater flow arrows for all existing and proposed channels, pipes, etc.

3 N/A Show drainage calculations considering off-site contributing drainage. Provide pre- and post-development velocities, peak rates of discharge, and inflow and outflow hydrographs of stormwater runoff at all existing and proposed points of discharge from the site for the two (2) year and the ten (10) year (and the 100 year frequency storm for projects in New Castle County north of the Chesapeake and Delaware Canal) frequency storm. Show site conditions around points of all surface water discharge including vegetation and method of flow conveyance from the land disturbing activity and design details for structural controls. (see Design Report)

4 X Provide details, cross-sections and specifications (including appropriate channel lining) for diversions, ditches, ponds, swales, infiltration structures, etc.

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5 N/A Provide inlet and outlet invert elevations for all drainage structures and facilities.

6 N/A Provide profiles for all outfall pipes and channels.

7 ____ All hydrologic computations shall be accomplished using the most recent version of USDA, Soil Conservation Service TR-20 or TR-55. The storm duration for computational purposes shall be the 24-hour rainfall event. For projects south of the C and D Canal, the Delmarva Unit Hydrograph shall be used. The pre-development peak discharge rate shall be computed assuming that all land uses in the site to be developed are in good hydrologic conditions.

* 8 N/A All ponds constructed for stormwater management shall be designed and constructed in accordance with USDA Soil Conservation Service Small Pond Code 378, dated September 1990, as approved for use in Delaware.

* 9 N/A Water quality ponds having a permanent pool shall be designed to release the first ½ inch of runoff from the site over a 24-hour period. Water quality ponds not having a permanent pool shall be designed to release the first inch of runoff from the site over a 24-hour period.

* 10 N/A Post-development peak rates of discharge for the two (2) year and the ten (10) year (and the 100 year frequency storm events for projects in New Castle County north of the C and D Canal) shall not exceed the pre-development peak rates of discharge for the two (2) year and the ten (10) year (and the 100 year frequency storm events for projects in New Castle County north of the C and D Canal) frequency storm events.

11 N/A Infiltration practices, when used, shall be designed to accept, at least, the first inch of runoff from all streets, roadways, and parking lots, (including all contributing drainage areas).

12 X All stormwater designs shall be in accordance with standards developed and/or approved by the DNREC. (channels only)

13 N/A Maintenance set aside areas for disposal of sediments removed from stormwater management facilities must be provided. Set aside areas shall accommodate at least 2% of the stormwater management facility volume to the elevation of the 2 year storage volume elevation, maximum depth of the set aside volume shall be one foot, and the slope of the set aside area shall not exceed 5%.

* 14 N/A All ponds shall have a forebay or other design feature to act as a sediment trap; a ten (10) foot reverse slope bench must be provided one foot above the normal pool elevation for safety purposes; a ten (10) foot level bench one foot below the normal pool elevation, and all embankment ponds having a permanent pool shall have a means to drain the pool.

15 N/A Infiltration practices shall be used only when the following criteria can be met or exceeded:

a. Areas draining to these practices must be stabilized and vegetative filters established prior to runoff entering the system.
b. A suspended solids filter accompanies the practice; when vegetation is used, there shall be at least a 20-foot length of vegetative filter.
c. The bottom of the infiltration practice is at least three feet above the seasonal high water table.
d. The infiltration practice shall be designed to drain completely within 48 hours.
e. Infiltration practices are limited to soils having an infiltration rate of at least 1.02 inches per hour. On site soil borings and textural classifications must be done to verify site conditions and seasonal high water table, this information must be submitted with the plan.
f. Infiltration practices greater than three feet deep shall be located at least 20 feet from basement walls.
g. Infiltration practices designed to handle runoff from impervious parking areas shall be a minimum of 150 feet from any public or private water supply well.
h. Infiltration practices shall have overflow systems with measures to provide a non-erosive velocity of flow along its length and at the outfall.
i. The slope of the bottom of the infiltration practice shall not exceed five percent.
j. Infiltration practices shall not be installed on or atop a slope whose natural angle of incline exceeds 20%.
k. Infiltration practices shall not be installed in fill material.
l. Unless allowed on a specific project, infiltration practices will only be permitted for the primary purpose of water quality enhancement.

*Refer to Design Report